

2a and 2b are being cancelled herein. In accordance with these amendments, the specification and drawings properly correspond. The applicant respectfully requests that these amendments be allowed and entered.

With respect to the claims:

Claim Rejections - 35 U.S.C. § 102

Considering the rejection of claims 1-2, 5-6, 29-30, and 33-34 (the “rejected claims”) under 35 U.S.C. § 102(b), Olsen et al., U.S. Patent No. 5,364,797 (“Olsen”) discloses a “sensor device containing mesoporous crystalline material.” Example 24 of Olsen relates to a “Fiber-Optic Chemical Sensor” and claim 16 of Olsen claims “a sensor device.” All of the rejected claims relate to “[a] method of forming a mesoscopically structured material having a dynamic change in refractive index.” Applicant does not claim the “Fiber-Optic Chemical Sensor” disclosed by Olsen, or the “sensor device” claimed by Olsen, as set forth in the basis for the rejection, nor does applicant claim an equivalent sensor device to that of Olsen.

Again, applicant claims “[a] method of forming a mesoscopically structured material having a dynamic change in refractive index.” The method of the rejected claims is not disclosed anywhere in Olsen.

Further, the “selective detecting component” of Olsen, such as the “dye” of claim 16, functions as a chemical sensor, or, responds to a chemical stimulus. (Olsen, Example 24). In the rejected claims, the incorporated dye does not have chemical sensing functionality or respond to a chemical stimulus. To the contrary, the dye specifically functions to control, by inducing optically responsive refractive index changes, the refractive index of the “mesoscopically structured material *having a dynamic change in refractive index.*” The “inorganic, porous, non-layered crystalline phase

material” disclosed by Olsen does not have a “dynamic change in refractive index,” nor does Olsen disclose any other material having a “dynamic change in refractive index.”

Finally, the “sensor device” disclosed by Olsen is comprised of a totally different material than that formed by the method of the rejected claims. Olsen discloses a material termed MCM-41. The material formed by the method of the present invention has been termed SBA-15, and is characteristically different than MCM-41. For example, SBA-15 has a much larger pore size than MCM-41. This is because of the ultra-large pore mesoporous structure of SBA-15. For example, as shown in Figure 2, SBA-15 has a pore size of approximately 20 nm. As shown in Figure 1c, SBA-15 has a much smaller pore size of only 8 nm, less than half that of SBA-15. SBA-15 is a different material than MCM-41, and it is not possible to synthesize MCM-41 with a pore size anywhere near that of SBA-15. The material formed by the method of the rejected claims is not disclosed anywhere in Olsen.

In light of the foregoing, applicant respectfully requests that claims 1-2, 5-6, 29-30, and 33-34 be allowed.

35 U.S.C. § 103

Considering the rejection of claims 7 and 35 (the “rejected claims”) under 35 U.S.C. § 103 over Olsen, in view of Takatori et al., U.S. Patent No. 3,901,769 (“Takatori”), again, Olsen discloses the incorporation of a dye into a “detector” so as to functionalize the detector as a chemical sensor. (Olsen, Example 24). Takatori discloses the incorporation of a dye into “an electrical recording member,” wherein the dye functions as “heat sensitive color former” for the purpose of forming an image (Takatori, col. 8, ll. 44-49; col. 9, ll. 42-68). It would not have been obvious to look to Olsen

in view of Takatori to incorporate a dye into the present invention so as to achieve the “dynamic change in refractive index.”

In light of the foregoing, applicant respectfully requests that claims 7 and 35 be allowed.


Double Patenting

Enclosed are Terminal Disclaimers for Application No. 10/426,441 and Patent No. 6,592,764.

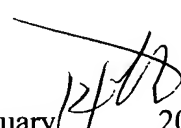
Should the Examiner have any further questions, the courtesy of a telephone interview is requested. The Examiner may contact the undersigned attorney for applicant at 214-739-0088.

Respectfully submitted,

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